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## **CLAIMS**

- 1. A vaginal indwelling thermometer in which the thermometer comprises temperature sensing means, and signal means for providing a continued indication that a predetermined threshold body temperature has been exceeded, integral with means to store temperature data generated by the temperature sensing means and which signal means provides a mechanical indication that the temperature has been exceeded.
- An indwelling thermometer according to claim 1, in which the signal is selected from the group comprising the movement of an indicator device, the release of a marker dye, vibration of the thermometer, and activation of a buzzer or alarm.
- 3. An indwelling thermometer according to claim 1 or claim 2, in which temperature sensing means is electronic, chemical or mechanical.
- 4. An indwelling thermometer according to any one of claims 1 to 3, in which the temperature sensing means comprises a thermochromatic dye, a wax or grease with a specific melting point, a thermodeformable plastics material, a thermocouple linkage, a thermistor or a printed circuit board.
- 5. An indwelling thermometer according to any preceding claim, in which the thermometer comprises an enclosed hollow container comprising two chambers separated by a waisted portion of the container.
- An indwelling thermometer according to any preceding claim, in which
  the waisted portion of the container contains the temperature sensing
  means.



- 7. An indwelling thermometer according to claim 6, in which the temperature sensing means is a wax or grease, the melting point of which is at or close to the predetermined threshold temperature.
- An indwelling thermometer according to any one of claims 1 to 7, in which the signal means is a marker dye contained in one chamber of the container only.
- An indwelling thermometer according to any preceding claim, in which the data relates to temperatures below and above the predetermined threshold.
- An indwelling themometer according to claim 9, in which the predetermined threshold is selected by a computer program.
- 11. An indwelling thermometer according to claim 10, in which the program is contained within the thermometer.
- 12. An indwelling thermometer according to any one of claims 1 to 4, in which the thermometer is formed from a plastics material with a thermochromatic pigment or ink incorporated therein.
- An indwelling thermometer according to claim 12, in which temperature sensing means comprises the thermochromatic pigment or ink and the signal means comprises a fixative to prevent the thermochromatic pigment or ink reverting to its original colour.
- 14. A kit of thermometers to establish the predetermined threshold temperature of an individual subject mammal, the kit comprising a series of thermometers according to any preceding claim, each thermometer detecting a different predetermined threshold temperature across a range of temperatures.





- 15. A kit according to claim 14, in which the temperature range is from 35-45°C.
- 16. Use of an indwelling thermometer according to any one of claims 1 to13, in which the mammal is a human.
- 17. Use of an indwelling thermometer according to claim 16, in a human female.
- 18. Use according to claim 17 for the detection of ovulation.
- 19. A method of determining ovulation, the method comprising the steps of inserting a thermometer according to any one of claims 1 to 13 into the ear or vagina of a subject mammal, allowing said thermometer to indwell, and periodically observing the signal means to detect a signal.
- 20. A method according to claim 19, in which the mammal is a human female.
- 21. A method of determining infection of a mammal, the method comprising the steps of inserting a thermometer according to any one of claims 1 to 10 into the ear or vagina of a subject mammal, allowing said thermometer to indwell, and periodically observing the signal means to detect a signal.

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